UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/665,948	09/18/2003	John D. Tanner	9256	6529

27752 7590 12/19/2005

THE PROCTER & GAMBLE COMPANY
INTELLECTUAL PROPERTY DIVISION
WINTON HILL TECHNICAL CENTER - BOX 161
6110 CENTER HILL AVENUE
CINCINNATI, OH 45224

EXAMINER	
KURTZ, BENJAMIN M	
ART UNIT	**PAPER NUMBER**
1723	

DATE MAILED: 12/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/665,948	TANNER ET AL.	
	Examiner	Art Unit	
	Benjamin Kurtz	1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05/05/2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *42-72* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *42-72* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

BK

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because it exceeds 150 words in length. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 42-45, 48, 50-51, 57, 60-61, 63-65 are rejected under 35 U.S.C. 102(b) as being anticipated by Gundrum (5891334). Referring to claim 42, Gundrum (334) discloses a water treatment cartridge (10&11) that is capable of sealingly and releasably engaging a water treatment device (12) (fig. 2, column 3, lines 58-60). The cartridge comprises: a housing (25), an inlet (23) for introducing water into the cartridge (column 4, lines 22-24), an outlet port (20) for egress of treated water (column 4, lines 1-4, 10-12), and a treatment media (13) (fig. 2, column 4, lines 1-4). The treatment media is in fluid communication with the inlet at (23) and with the outlet at (20) (fig. 2). The cartridge also comprises: a first tube (27), the first tube comprising an inside (threaded portion) and an outside surface (fig. 2), the first tube comprising a proximal end (contacting the housing (25)) and a distal end, wherein at least one of the inside and outside surface is a sealing surface (the threaded surface is a sealing surface) (fig. 2). The cartridge also comprises: a second tube (33), the second tube comprises an inside (38) and outside surface (column 4, lines 61-64), the second tube comprising a proximal end (connected to ribs (34)) (fig. 2) and a distal end

(containing o-rings (42)) (fig. 2), wherein at least one of the inside and outside surface is a sealing surface (column 4, lines 61-63, and column 5, lines 13-16). The first tube (27) extends from the housing (25) and surrounds the outlet port (20) (fig. 2, column 4, lines 27-29). A portion of the first tube (27) surrounds the second tube (33) (fig. 2), and a gap is formed between the first and second tube (fig. 2).

3. Referring to claim 43, Gundrum (334) discloses at least one sealing surface of the first (27) and second (33) tubes are coplanar (a plane (see highlighted below) containing an o-ring (42) of the second tube (33) contains a portion of the threaded surface of the first tube (27) (fig. 2)).

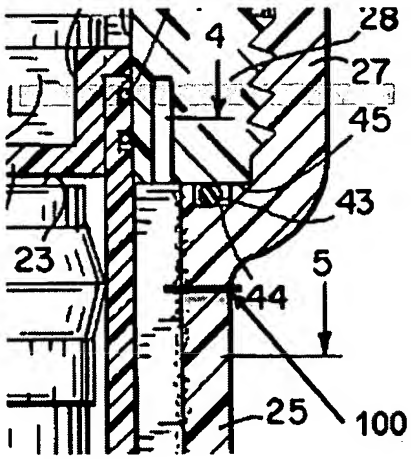

Figure 1: Gundrum (334) fig. 2

4. Referring to claim 44, Gundrum (334) discloses that a portion of the inside surface of the first tube (27) is a sealing surface (the threaded portion) and a portion of the inside surface (38) of the second tube (33) is a sealing surface (column 4, lines 61-63).

5. Referring to claim 45, Gundrum (334) discloses the distal end of the first tube (27) extends from the water treatment cartridge housing a greater distance than the distal end of the second tube (33) (fig. 2).

6. Referring to claim 48, Gundrum (334) discloses the second tube (33) extends from the first tube (27) (the axial ribs (34) of the second tube (33) are attached to the first tube (27), the first tube (27) begins at line 100 (see below)) and the first tube (27) extends from the water treatment cartridge housing (25) (fig. 2).

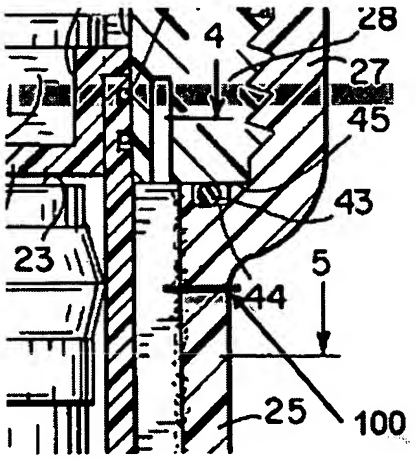

Figure 2: Gundrum (334) fig. 2

7. Referring to claim 50, Gundrum (334) discloses a water treatment cartridge (10&11) that is capable of sealingly and releasably engaging a water treatment device (12) (fig. 2, column 3, lines 58-60). The cartridge comprises: a housing (25), an inlet (23) for introducing water into the cartridge (column 4, lines 22-24), an outlet port (20) for egress of treated water (column 4, lines 1-4), and a treatment media (13) (fig. 2, column 4, lines 1-4). The treatment media is in fluid communication with the inlet (23) and with the outlet (14) (fig. 2). The cartridge

also comprises: a first tube (33), the first tube comprising an inside (38) and an outside surface (fig. 2), the first tube comprising a proximal end (connected to ribs (34)) and a distal end (containing o-rings (42)), wherein at least one of the inside and outside surface is a sealing surface (column 4, lines 61-63, and column 5, lines 13-16). The cartridge also comprises: a second tube (27), the second tube comprises an inside (threaded portion) and outside surface (fig. 2), the second tube comprising a proximal end (where it contacts the housing (25)) (fig. 2) and a distal end (fig. 2), wherein at least one of the inside and outside surface is a sealing surface (the threaded surface is a sealing surface). The first tube (33) extends outwardly from the housing (25) (extends outwardly from the interior of the housing (25)), and surrounds the outlet port (20) (fig. 2). The second tube (27) surrounds a portion of the first tube (33) (fig. 2) and a gap is formed between the first (33) and second (27) tube (fig. 2). The distal end of the second tube (27) extends a greater distance from the housing than the distal end of the first tube (33) (fig. 2).

8. Referring to claim 51, Gundrum (334) discloses a portion of the inside surface (38) of the first tube (33) is a sealing surface (column 4, lines 61-63) and a portion of the inside surface of the second tube (27) is a sealing surface (the threaded portion, fig. 2).

9. Referring to claim 57, Gundrum (334) discloses a water treatment cartridge (10&11) that is capable of sealingly and releasably engaging a water treatment device (12) (fig. 2, column 3, lines 58-60). The cartridge comprises: a housing (25), an inlet (23) for introducing water into the cartridge (column 4, lines

22-24), an outlet port (14) for egress of treated water (column 4, lines 1-4), and a treatment media (13) (fig. 2, column 4, lines 1-4). The treatment media is in fluid communication with the inlet at (23) and with the outlet at (20) (fig. 2). The cartridge also comprises: a first tube (33), the first tube comprising an inside (38) and an outside surface (fig. 2), the first tube comprising a proximal end (connected to ribs (34)) and a distal end (containing o-rings (42)), wherein at least one of the inside and outside surface is a sealing surface (column 4, lines 61-63, and column 5, lines 13-16). The cartridge also comprises: a second tube (20), the second tube comprises an inside and outside surface (fig. 2&3), the second tube comprising a proximal end (contacting surface (23)) (fig. 2) and a distal end (containing o-rings (22)) (fig. 2), wherein at least one of the inside and outside surface is a sealing surface (column 5, lines 8-9). The first tube (33) extends from the housing (ribs (34) are connected to the housing (25)) and surrounds the outlet port (14) (fig. 2). The first tube (33) surrounds the second tube (20) (fig. 2). The sealing surface of the first tube (33) and the sealing surface of the second tube (20) extend from the water treatment cartridge housing about the same distance (fig. 2, highlighted section shows two sealing surfaces at the same distance from the housing (25) see below).

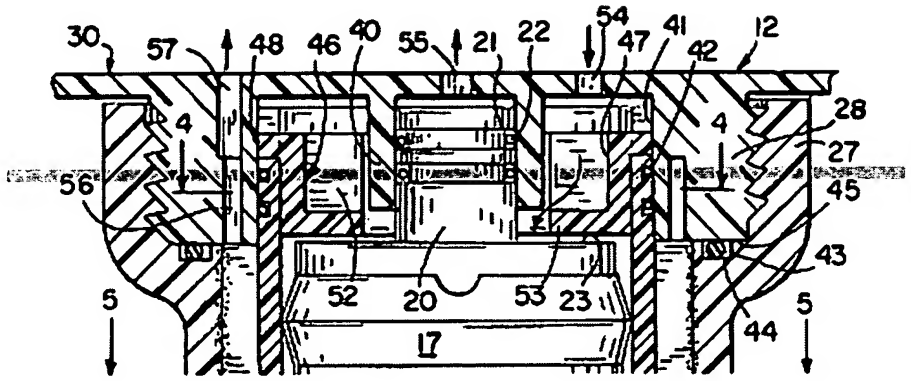

Figure 3: Gundrum (334) fig. 2

10. Referring to claim 60, Gundrum (334) discloses a water treatment device comprising: a first housing (see highlighted below) surrounding an outlet (20) (column 5, lines 1-16), the first housing (40) comprising an inside and outside surface (fig. 2), and the first housing (highlighted below) comprising a sealing surface (o-rings 42, fig. 2). The device also comprises a second housing (28, highlighted below) comprising an inside and outside surface (fig. 2), and the second housing (28) comprises a sealing surface (threaded portion of outside surface). A portion of the second housing (28) surrounds a portion of the first housing (highlighted below) (fig. 2), and a gap (56) is formed between the outside surface of the first housing (highlighted below) and the inside surface of the second housing (28).

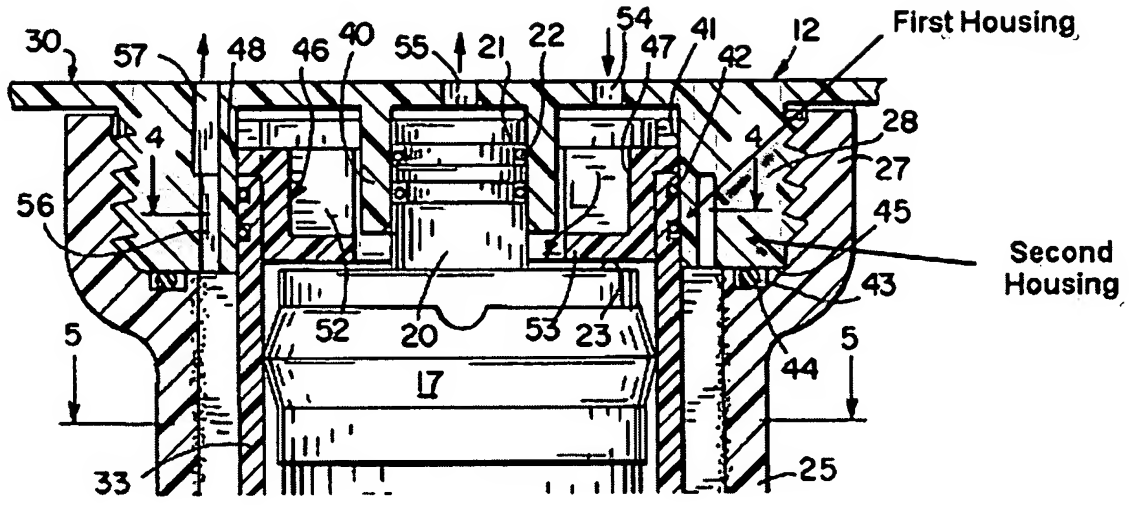

Figure 4: Gundrum (334) fig. 2

11. Referring to claim 61, Gundrum (334) discloses the area between the outside surface of the first housing (highlighted above) and the inside surface of the second housing (28) does not function as an untreated water inlet passageway (column 6, lines 43-58).

12. Referring to claim 63, Gundrum (334) discloses a water treatment device that comprises a pressure vessel (11) that is sealingly fitted to the water treatment device (fig. 2, column 3, lines 58-60). When the cartridge is engaged to the treatment device the pressure vessel (11) is in untreated fluid communication with the first housing (at (41) (highlighted above), (the sleeve (33) is part of the pressure vessel (11)), but is not in untreated fluid communication with the second housing (fig. 2).

13. Referring to claim 64, Gundrum (334) discloses that the pressure vessel (11) is threadably fitted to the water treatment device (fig. 2, column 4, lines 27-31).

14. Referring to claim 65, Gundrum (334) discloses the first housing (40) is a tube (fig. 2) and the second housing is a tube (fig. 2).

15. Claims 60 and 66 are rejected under 35 U.S.C. 102(b) as being anticipated by Hunter (5114572). Referring to claim 60, Hunter (572) discloses a fluid treatment device comprising a first housing (64) surrounding an outlet (52) (fig. 1&2, column 4, lines 34-36), the first housing (64) comprising an inside surface and an outside surface (fig. 2), and the first housing (64) comprising at least one sealing surface (surface adjacent to o-rings (56) and (58). Hunter (572) also discloses a second housing (80) comprising an inside surface and an outside surface (fig. 2) and at least one sealing surface (column 5, lines 15-18). A portion of the second housing (80) surrounds a portion of the first housing (64) (fig. 2) and a gap (70) is formed between the outside surface of the first housing (64) and the inside surface of the second housing (80) (fig. 2).

16. Referring to claim 66, Hunter (572) discloses that the first (64) and second (80) housings are concentric (fig. 2) and the first housing (64) extends from the device a greater distance than the second housing (80) (fig. 2).

17. Claims 42, 49-50, 52, 55 are rejected under 35 U.S.C. 102(b) as being anticipated by Williams (5695168). Referring to claim 42, Williams (168) discloses a water treatment cartridge (13) capable of sealingly and releasably engaging a water treatment device (19) (column 3, lines 53-55). The cartridge

comprising: a housing (87) (fig. 1), an inlet (89) for introducing water in to the water treatment cartridge (13) (column 5, lines 25-31), and outlet port (69) for egress of treated water from the water treatment cartridge (13) (column 4, lines 38-44), and a treatment media (15), the treatment media being in fluid communication with the inlet (89) and the outlet port (69) (fig.1, column 3, lines 10-15). A first tube (67) comprising: an inside and outside surface (fig. 1), a proximal and distal (71) end (fig. 1), and the inside surface is a sealing surface (fig. 2, the inside surface seals with gasket (86)). A second tube (37) comprising: an inside and outside surface (fig. 1), a proximal and distal (41) end (fig. 1), and the outside surface is a sealing surface (103) (column 5, lines 38-43). The first tube (67) extends from the housing (87) and surrounds the outlet port (69) (fig. 1), the second tube (37) surrounds the first tube (67) such that a gap (89) is formed between (fig. 1) when the cartridge is not sealingly engaged to the treatment device.

18. Referring to claim 49, Williams (168) discloses that a portion of the outside surface of the second tube (37) is a cam surface (41) (column 6, lines 1-9).

19. Referring to claim 50, Williams (168) discloses a water treatment cartridge (13) capable of sealingly and releasably engaging a water treatment device (19) (column 3, lines 53-55). The cartridge comprising: a housing (87) (fig. 1), an inlet (89) for introducing water in to the water treatment cartridge (13) (column 5, lines 25-31), and outlet port (69) for egress of treated water from the water treatment cartridge (13) (column 4, lines 38-44), and a treatment media (15), the treatment media being in fluid communication with the inlet (89) and the outlet port (69)

(fig.1, column 3, lines 10-15). A first tube (67) comprising: an inside and outside surface (fig. 1), a proximal and distal (71) end (fig. 1), and the inside surface is a sealing surface (fig. 2, the inside surface seals with gasket (86)). A second tube (37) comprising: an inside and outside surface (fig. 1), a proximal and distal (41) end (fig. 1), and the outside surface is a sealing surface (103) (column 5, lines 38-43). The first tube (67) extends from the housing (87) and surrounds the outlet port (69) (fig. 1); the second tube (37) surrounds the first tube (67) such that a gap (89) is formed between (fig. 1) when the cartridge is not sealingly engaged to the treatment device. And the distal end (41) of the second tube (37) extends a greater distance from the housing (87) than the distal end of the first tube (67) (fig. 1).

20. Referring to claim 52, Williams (168) discloses the most distal sealing surface (71) of the first tube (67) extends from the treatment cartridge housing (87) a greater distance than the most distal sealing surface (103) of the second tube (37) (see fig. 1 below, highlighted plane contains the sealing surface of the second tube (37) and the first tube sealing surface (71) extends above the plane).

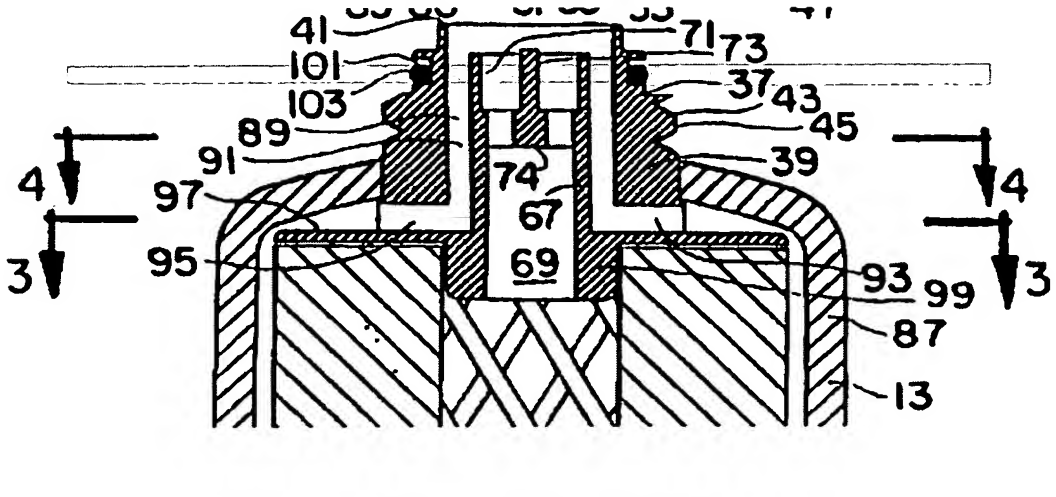

Figure 5: Williams (168) fig. 1

21. Referring to claim 55, Williams (168) discloses that a portion of the outside surface of the second tube (37) is a cam surface (41) (column 6, lines 1-9).

Claim Rejections - 35 USC § 103

22. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

23. Claims 47, 54, 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gundrum (334). Referring to claim 47, Gundrum (334) discloses the cartridge but does not disclose the diameter of the inside surface of the second tube (33) or the diameter of the outside surface of the first tube (27). It would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify the cartridge as taught by Gundrum (334) to have the inside surface of the second tube (33) be a diameter of 1-5cm and to have the outside surface of the first tube (27) be a diameter of 0.5-3cm. The cartridge as taught by Gundrum (334) has the first tube (27) surrounding the second tube (33), thus the first tube (27) protects the sealing surface (42) of the second tube (33) from possible damage by contact with a foreign object. The diameter qualifications are secondary to this primary function of protecting the sealing surface (42) of the second tube (33). Although it is possible for the cartridge, as taught by Gundrum (334), to have diameters that fall within the specified range, the primary function of protecting the sealing surface (42) is fulfilled. Therefore, Gundrum (334) anticipates this claim.

24. Referring to claim 54, Gundrum (334) discloses the cartridge but does not disclose the diameter of the inside surface of the second tube (27) or the diameter of the outside surface of the first tube (33). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the cartridge as taught by Gundrum (334) to have the inside surface of the second tube (27) be a diameter of 1-5cm and to have the outside surface of the first tube (33) be a diameter of 0.5-3cm. The cartridge as taught by Gundrum (334) has the second tube (27) surrounding the first tube (33), thus the second tube (27) protects the sealing surface (42) of the first tube (33) from possible damage by contact with a foreign object. The diameter qualifications are secondary to this primary function of protecting the sealing surface (42) of the first tube (33). Although it is possible for the cartridge, as taught by Gundrum (334), to have

diameters that fall within the specified range, the primary function of protecting the sealing surface (42) is fulfilled. Therefore, Gundrum (334) anticipates this claim.

25. Referring to claim 59, Gundrum (334) discloses the cartridge but does not disclose the diameter of the inside surface of the second tube (20) or the diameter of the outside surface of the first tube (27). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the cartridge as taught by Gundrum (334) to have the inside surface of the second tube (20) be a diameter of 1-5cm and to have the outside surface of the first tube (27) be a diameter of 0.5-3cm. The cartridge as taught by Gundrum (334) has the first tube (27) surrounding the second tube (20), thus the first tube (27) protects the sealing surface (22) of the second tube (20) from possible damage by contact with a foreign object. The diameter qualifications are secondary to this primary function of protecting the sealing surface (22) of the second tube (20). Although it is possible for the cartridge, as taught by Gundrum (334), to have diameters that fall within the specified range, the primary function of protecting the sealing surface (22) is fulfilled. Therefore, Gundrum (334) anticipates this claim.

26. Claims 62, 69-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gundrum (5891334) in view of Thomsen (4725354). Referring to claim 62, Gundrum (334) discloses the water treatment device and the area between the outside surface of the first housing (40) and the inside surface of the second housing (28) having a port but does not disclose that the port functions

as an air vent. Thomsen (354) discloses a water treatment device wherein the head member (14) contains an air vent hole (38). It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the water treatment device comprising a port as taught by Gundrum (334) and the water treatment device with an air vent as taught by Thomsen (354). A vent hole can vent air or any fluid that may have collected in the space such as during filter cartridge replacement (column 2, lines 45-49).

27. Referring to claim 69, Gundrum (334) discloses a water treatment device (12) capable of sealingly and releasably engaging a water treatment cartridge (column 3, lines 58-60), and a water treatment cartridge comprising a first tube (20) and a second tube (33). Gundrum (334) discloses: an outlet housing (40) that sealingly engages the first tube (20) of the water treatment cartridge (column 5, lines 1-16), the outlet housing (40) comprising an inside and outside surface (fig. 2), and the outlet housing (40) comprising at least one sealing surface (column 5, lines 1-16). Gundrum (334) also discloses a vent housing (28) that sealingly engages the second tube (33) of the water treatment cartridge (column 5, lines 1-16), the vent housing (28) comprising an inside and outside surface (fig. 2), and the vent housing (28) comprising at least one sealing surface (column 5, lines 1-16). Gundrum (334) also discloses a portion of the inside surface of the outlet housing (40) defines a treated water outlet passageway (55) (fig. 2, column 6, lines 38-40) and a portion of the vent housing (28) surrounds at least a portion of the outlet housing (40) (fig. 2). Gundrum (334) discloses that at least a portion of the outside surface of the outlet housing (40) and at least a

portion of the inside surface of the vent housing (28) form and define a passage and a port but Gundrum (334) does not disclose that passage and port being an air vent. Thomsen (354) discloses a water treatment device wherein the head member (14) contains an air vent hole (38). It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the water treatment device comprising a passage and port as taught by Gundrum (334) with the water treatment device comprising an air vent as taught by Thomsen (354). An air vent can vent air or any fluid that may have collected in the space such as during filter cartridge replacement (column 2, lines 45-49).

28. Referring to claim 70, Gundrum (334) discloses a water treatment system comprising a cartridge (10&11) capable of sealingly and releasably engaging a water treatment device (12) (column 3, lines 58-60). The cartridge (10&11) comprising: a housing (25), an inlet (23) for introducing water into the treatment cartridge (column 4, lines 22-24), an outlet port (14) for egress of treated water from the treatment cartridge (column 4, lines 1-4, 10-12), a treatment media (13) (fig. 2, column 4, lines 1-4), the treatment media being in fluid communication with the inlet (23) and outlet (14) ports (fig. 2, column 6, lines 34-40). A first tube (20) (fig. 2) comprising: an inside and outside surface (fig. 2&3), a proximal and distal end (proximal end adjacent to surface (23) and distal end containing o-rings (22), at least one of the inside surface and outside surface is a sealing surface (fig. 2, o-rings (22) on outside surface). A second tube (33) (fig. 2) comprising: an inside and outside surface (column 4, lines 61-64), a proximal and distal end (proximal end attached to ribs (34), distal end containing o-rings (42)),

at least one of the inside and outside surface is a sealing surface (column 4, lines 61-63, and column 5, lines 13-16). The first tube (20) extends from the housing (25) and surrounds the outlet port (14) (fig. 2) and a portion of the second tube (33) surrounds the first tube (20) (fig. 2). A water treatment device (12) for sealingly and releasably engaging the water treatment cartridge (10&11) (columns 3, 58-60). The water treatment device (12) comprising: an outlet housing (40) (fig. 2, column 5, lines 1-16) comprising and inside and outside surface (fig. 2), and outlet housing (40) comprising at least one sealing surface (fig. 2, surface adjacent the o-rings (22)), a vent housing (28) (fig. 2), having an inside and outside surface (fig. 2) and comprising at least one sealing surface (fig. 2, threaded surface is a sealing surface). At least a portion of the inside surface of the outlet housing (40) forms and defines a treated water outlet passageway (55) (fig. 2, column 6, line 36-40). The first tube (20) sealingly engages the outlet housing (40) (fig. 2, column 5, lines 1-16), the second tube (33) sealingly engages the vent housing (28) (fig. 2, column 5, lines 1-16), such that the inside surface of the first tube (20) and the inside surface of the outlet housing (40) are in fluid communication (fig. 2, column 6, lines 36-40), and such that the outside surface of the first tube (20) and the inside surface of the vent housing (28) are in fluid communication (the highlighted region below is where fluid is in communication).

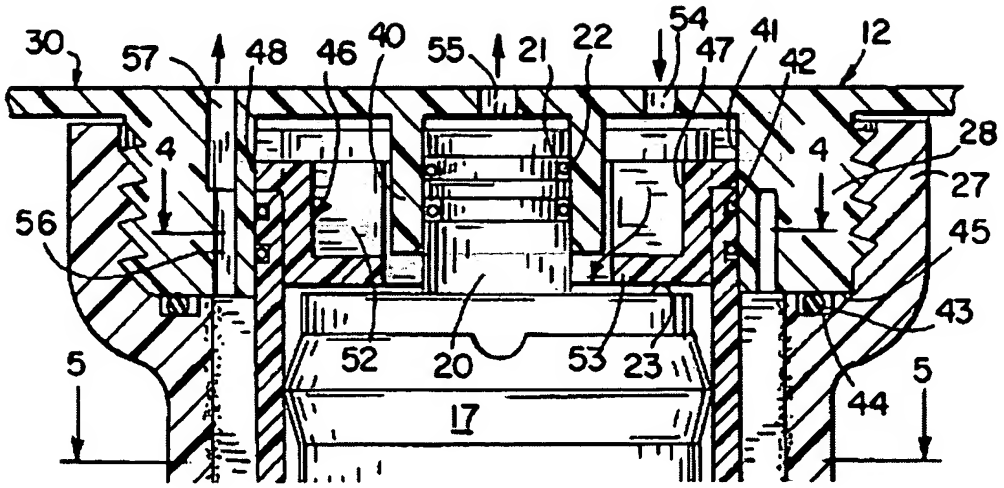

Figure 6: Gundrum (334) fig. 2

Gundrum (334) discloses that a portion of the outside surface of the outlet housing (40) and a portion of the insides surface (41) of the vent housing forms a space but does not disclose that it is an air vent. Thomsen (354) discloses a water treatment device wherein the head member (14) contains an air vent hole (38). It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the water treatment device comprising a passage and port as taught by Gundrum (334) with the water treatment device comprising an air vent as taught by Thomsen (354). An air vent can vent air or any fluid that may have collected in the space such as during filter cartridge replacement (column 2, lines 45-49).

29. Claim 71 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gundrum (334) in view of Thomsen (354) as applied to claim 70 above, and further in view of Magnusson (6027644). Gundrum (334) in view of Thomsen (354) discloses the water treatment system but does not disclose that at least

one sealing surface of the outlet housing (40) is an o-ring oriented around the outside surface of the outlet housing (40) and it does not disclose that at least one sealing surface of the vent housing (28) is an o-ring oriented around the outside surface of the vent housing (28). Magnusson (644) discloses a water treatment system with an outlet housing (see below) and a vent housing (see below). The vent housing and the outlet housing both have at least one sealing surface that is an o-ring (22, 24, 26) oriented around the outside surfaces of the outlet and vent housings (fig. 2). It would have been obvious to one having ordinary skill in the art at the time the invention was made to apply o-rings to the outside surfaces of the outlet and vent housings. The o-rings contain the flow from the cartridge to the housings and also provide a seal against undesired back bypass migration of viral contaminants (column 5, lines 3-7).

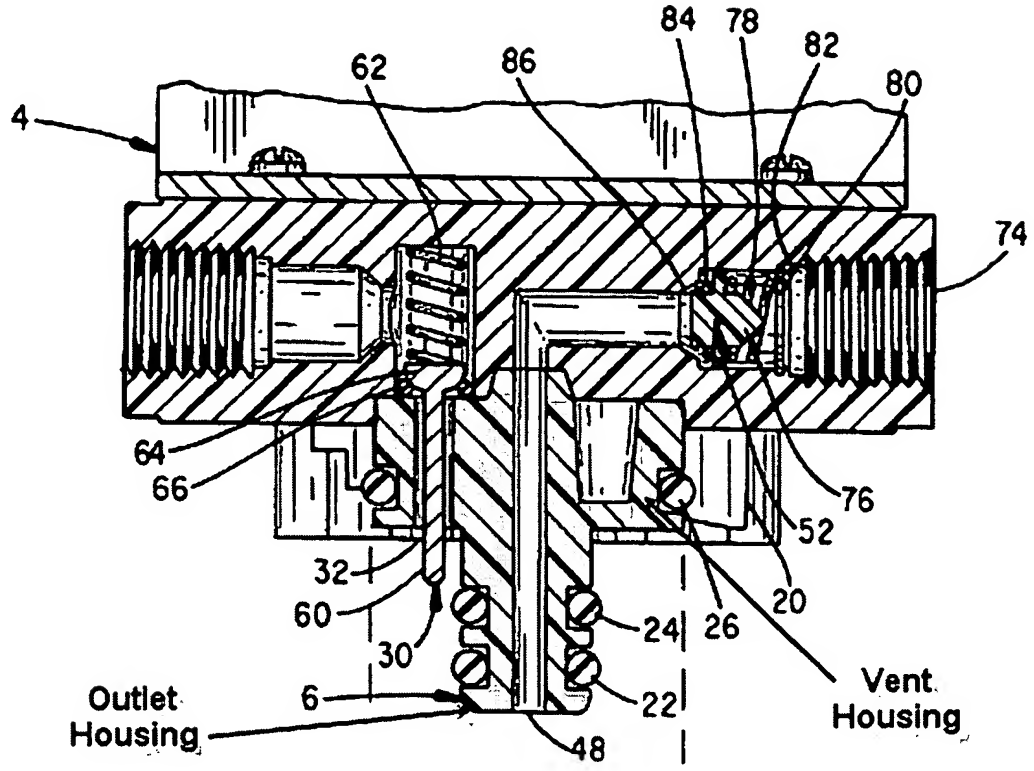

Figure 7: Magnusson (644) fig. 2

30. Claim 72 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gundrum (334) in view of Thomsen (354) as applied to claim 70 above, and further in view of Fritze (6649056). Gundrum (334) in view of Thomsen (354) discloses the treatment system but does not disclose that at least one sealing engagement of the second tube (33) and the vent housing (28) occurs distal to at least one sealing engagement of the first tube (20) and the outlet housing (40), relative to the water treatment cartridge. Fritze (056) discloses a first tube (180) and a second tube (178) sealingly engaged to an outlet housing (see below) and a vent housing (see below) respectively (fig. 11). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify

the treatment system as taught by Gundrum (334) in view of Thomsen (354) with the treatment system as taught by Fritze. The assembly taught by Fritze provides for the cartridge end cap to be readily insertable into the end cap (column 8, lines 4-15).

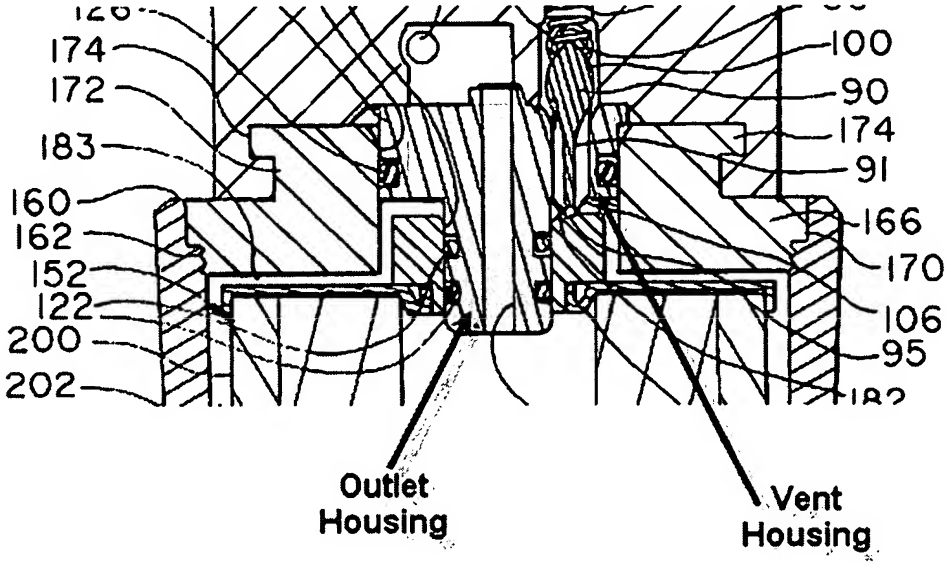

Figure 8: Fritze (056) fig. 11

31. Claims 46, 53, 58, 67-68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gundrum (334) in view of Williams (5695168). Referring to claim 46, Gundrum (334) discloses the first tube (27) and second tube (33) having o-rings (43 and 42) (fig. 2). Williams (168) discloses a tube (67) with a sealing surface (71) that is not an o-ring (fig. 1&2, column 5, lines 4-12). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the sealing surfaces as taught by Gundrum (334) with the sealing surface as taught by Williams (168). The cartridge can seal with the treatment device without the cartridge having an o-ring (column 5, lines 4-12).

32. Referring to claim 53, Gundrum (334) discloses the first tube (33) and second tube (27) having o-rings (43 and 42) (fig. 2). Williams (168) discloses a tube (67) with a sealing surface (71) that is not an o-ring (fig. 1&2, column 5, lines 4-12). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the sealing surfaces as taught by Gundrum (334) with the sealing surface as taught by Williams (168). The cartridge can seal with the treatment device without the cartridge having an o-ring (column 5, lines 4-12).

33. Referring to claim 58, Gundrum (334) discloses the first tube (27) and second tube (20) having o-rings (43 and 42) (fig. 2). Williams (168) discloses a tube (67) with a sealing surface (71) that is not an o-ring (fig. 1&2, column 5, lines 4-12). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the sealing surfaces as taught by Gundrum (334) with the sealing surface as taught by Williams (168). The cartridge can seal with the treatment device without the cartridge having an o-ring (column 5, lines 4-12).

34. Referring to claim 67, Gundrum (334) discloses the outside surface of the second housing (28) (see below) is a sealing surface (threaded portion) but does not disclose that the outside surface of the first housing (see below) is a sealing surface. Williams (168) teaches an outside surface for a first housing (81) that is a sealing surface (86). I would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the second housing (28) of Gundrum (334) with the first housing (81) of Williams (168). The sealing surface

of the first housing provides a seal between the housing and the tube of the cartridge when the cartridge is connected to the housing (column 5, lines 4-12).

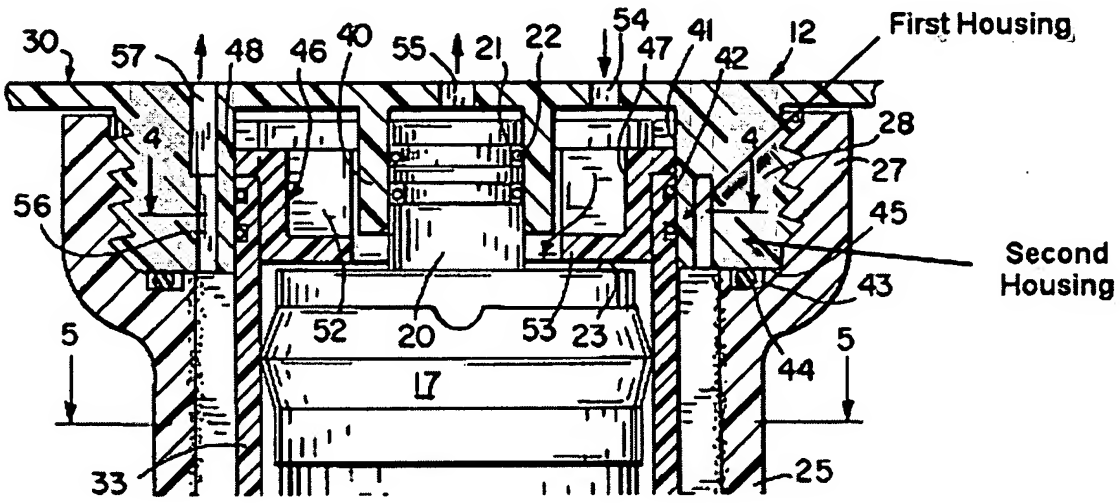

Figure 9: Gundrum (334) fig. 2

35. Referring to claim 68, Gundrum (334) discloses a sealing surface for the second housing (28) but does not disclose that all sealing surfaces are o-rings. Williams discloses that the sealing surface (86) of the first housing (81) is an o-ring (column 5, lines 4-12). It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the o-ring as taught by Williams (168) with the sealing surface as taught by Gundrum (334). An o-ring provides a firm seal (column 5, lines 4-12) and is inexpensive.

36. Claim 56 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gundrum (334) in view of Reid (6274038). Gundrum (334) discloses the water treatment cartridge but does not disclose that the treatment media comprises a radial flow carbon block. Reid (038) discloses a cartridge (80) that includes a

treatment media (75) comprising a radial flow carbon block (fig. 1, column 3, line 66 – column 4, line 5). It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the filter media as taught by Gundrum (334) with the carbon block as taught by Reid (038). The carbon block reduces the concentration of volatile organic contaminants, chemicals, parasites, sediment, biocide, and consequent suspended and dissolved materials including killed microorganisms and pathogens (column 3, line 66 – column 4, line 5).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin Kurtz whose telephone number is 571-272-8211. The examiner can normally be reached on Monday through Friday 8:00am to 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Joseph Drodge
JOSEPH DRODGE
PRIMARY EXAMINER

bk